**IT Applications, Unit 4**

**Ch 4, Organisations and information needs, p 129-136**

What is an information system?

1. Define an information system.

An information system is a group of components that work together. It processes data and manipulates it into meaningful and useful information.

1. List the 4 components of an information system.

The four components are Equipment (software/hardware), Data, Personnel to oversee the running of the system, and procedures to ensure data is manipulated efficiently.

**Components of an information system**, p 131

**Equipment**

**1 Software**

Elaborate under each of the following four main types of software.

1. Operation or system software

Controls the actual operations of the computer hardware. Some of the functions include start up, executing applications, storing/retrieving files, sending information and formatting hard disks.

1. Application software

Provides support to computer users. They are generally created and sold in large quantities, for example word processing programs (Word), spread sheets (Excel), or databases (file maker pro). These are the programs you run on the computer.

1. Utility software

Utility software performs a particular task such as diagnosing problems, scanning disks, creating back-ups and scanning for viruses, such as Norton Antivirus.

1. Programming software

A set of words or codes that allows a programmer to instruct the computer. It is the computers language much like English to Humans, and can ‘speak’ many different ‘languages’ such as HTML, PHP and Java, etc.

**2 Hardware**

a. List the 5 core components of a pc.

The 5 core components are the CPU or system unit, the hard disk, the monitor, the keyboard and the mouse. All other devices are considered peripherals as the computer can function without them.

**3 Data**

1. Describe the nature of data.

Data is raw and unorganised strings of information, such as numbers, letters and words etc. It is then processed to become meaningful information.

**4 Personnel**

1 Who are the personnel in organisations?

Personnel are the users: the customers, employees, sellers of goods and other people who use the information system. They can be managers or technicians, sales reps and customers. In most organisations, It is important to have a group of ICT professionals to act in support, such as analysts, programmers, managers and network administrators.

**5 Procedures**

1. What is the purpose of procedures?

Procedures are a series of steps that are followed so that tasks are performed uniformly and consistently. The tasks that procedures describe may include backing up data, adding a new account for customer, etc. They are often documented in manuals.

**Information characteristics in organisations,** p 133

**Information flow**

1. What is meant by information flow?

Information flow is the speed at which information that is being inquired about by a customer can be looked up and relayed to that customer to potentiate the sale of goods.

1. List the four hierarchy levels within a large organisation and the people who are at each of these levels.

Senior management – chief executive officer, president

Middle management – director, manager

Operational management – supervisor, team leader, area coordinator

Operational workers – computer operators, receptionists, workers, clerks etc.

**Structure of information, p 134**

Describe the following categories or structures of information and which hierarchy level uses the information.

1. Detail reports

Involve the communication of all the assembled records; one line of the detail report is assigned to each record. For example an assessment sheet that includes a comment on each criteria, the percentage, average of the class etc.

1. Summary reports

A brief version of the detail reports that use totals and averages rather than reporting individual items. Used in middle and senior management to gain an understanding of what is happening at operational level.

1. Aggregate reports

Similar to detail reports, but they only relate to one particular factor or subject. Middle management would use the aggregate sales report to find out the recorded sales of a product over a period of time.

1. Sample reports

Sample reports are a section of the detailed information that provides senior management with an idea of the overall situation. Taking a sample eliminates all the irrelevant material.

1. Exception reports.

Identifies data that shows variation from the set or target result, and helps identify situations that require action.

**Decision-making in organisations, p 135**

Under each of the following levels of management describe the characteristics of decision making made, strategic, tactical, operational and day-to-day decisions.

1. Decision-making by senior management

Strategic decisions can involve very complicated problems that relate to the long term goals of an organisation. They may take years to make. The decisions often involve studying market trends, choosing new products to manufacture, determining site locations etc.

1. Decision-making by middle management

Tactical decisions made by middle management solve problems that affect the running of the organisation. Managers of each department are responsible for running their own department and making sure the strategic decisions of senior management are carried out. Most tactical decisions are made in either weeks or months.

1. Decision-making by operational management

Lower management deals with the day to day operational decisions, such as directing customer complaints, replacing sick workers, ordering stock etc. These decisions are made on the spot and don’t usually have lasting effects on the business, but often affect the morale of the workers.

1. Decision-making by operational workers

Workers have to make day-to-day decisions that help the efficient running of the business. As they are usually the first point of contact with customers they need to make decisions about who is next in the queue, whether to send complaints to management, where to direct customer query, and what type of software should be used. These are also short term decisions with little overall effect on the business.